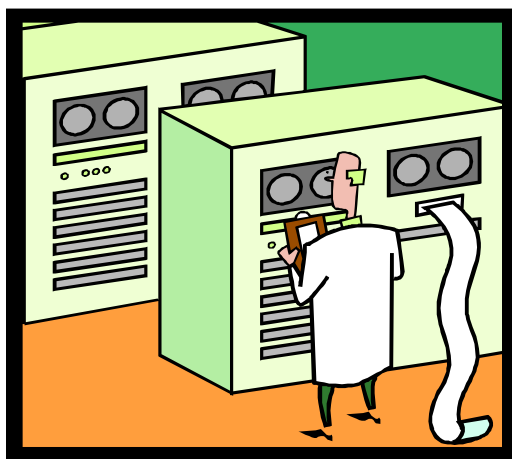# Data Driven Decision Making

# Outline

- Information Needs
- Tools
  - M2
  - CDIS
  - MCFAS
  - RM Websites

# Information Needs

Key business programs being implemented in the MHS:

- Next Generation of TRICARE Contracts
- Business Plans
- Output Driven Resource Allocation (ODRA)

# Information Needs

- ## Next Generation Contracts

  - Revised Financing
  - MTFs "at risk" for purchased care for their enrollees
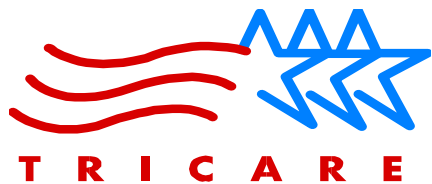  - MTFs pay monthly invoices to MCS Contractors

# Information Needs

- <u>Business Plans</u>

    – MTFs project workload and enrollment

    – Business plans are "valued"

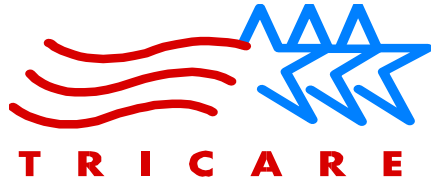    – Performance is monitored against projections

# Information Needs

- <u>ODRA</u>

  – Prospective Payment, based on enrollment

  – MTFs pay bills for care provided to their enrollees, regardless of point of service

  – MTFs receive fee for service payments for care they provide for anyone else

# Information Needs

- Basic business questions to be centered around enrollment
  - Who is enrolled? Who isn't who should be?
  - How much does it cost to care for an enrollee?
  - What services should I provide to enrollees? What should I buy?
  - Who should I buy from?
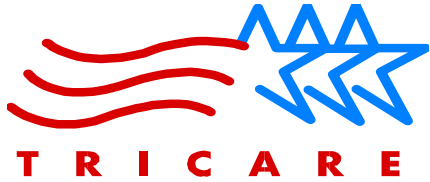  - Are the invoices I am receiving correct?

# Information Needs

- Mix of patients in an MTF is important.

- Understanding of costs to provide and purchase services is also important
  - Market area planning/management.
  - MTFs need to access local pricing information
  - Care downtown, care at other MTFs (eventually).

# Information Overload

# Basic Data Flows

- Operational Systems
  - Core business systems, data capture
  - Real time, system downtime highly undesirable
  - Data Extracts provided to other systems, in lieu of massive "in place" querying.

- Notes:
  - Operational Systems are not generally used by "corporate" for decision-making
  - Key strength is in real-time availability of data
  - Weakness is in scope of data

# Operational Systems

- Key Operational Systems:
  - DEERS:  Eligibility and Enrollment
  - CHCS/ADM:  MTF operations
  - TMA-A:  TRICARE Claims (downtown care)
  - PDTS:  Rx Records

- Operational Systems provide routine extracts to "end user systems" (generally through a corporate data warehouse)
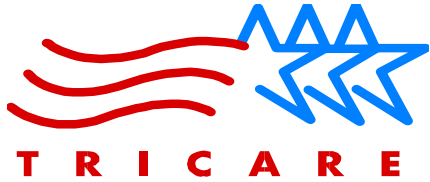
# Systems

- Advantages of using "end user applications" for data access:
  - Removes burden of excessive querying on operational systems
  - Can receive data from numerous sources, allows for a more holistic view of business

- Disadvantage:
  - Not generally real time.
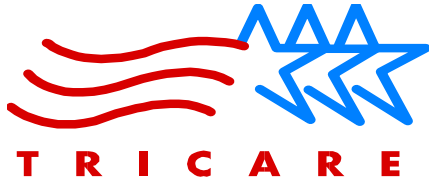
# End User Systems
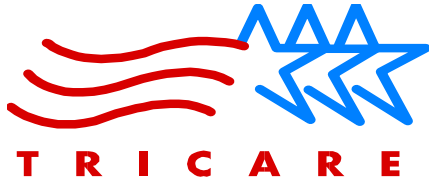
- Buzzword:  Data Mart
- Data Marts contain data from operational systems (local and central)
- Systems where users access data
  - Canned Reports
  - Files, where users write customized queries
- MHS has both types of data marts
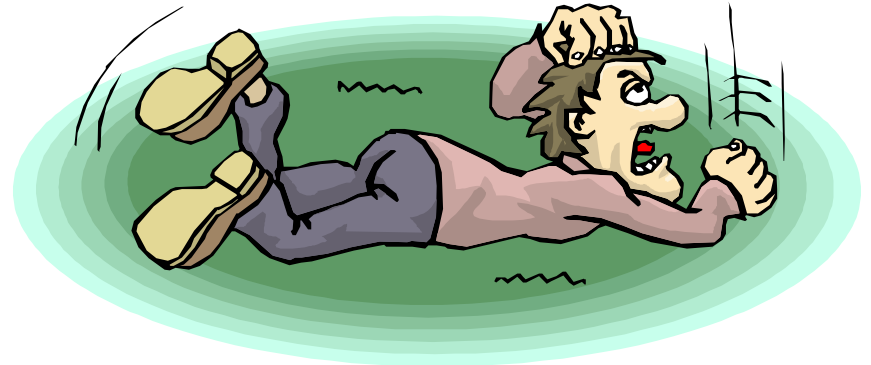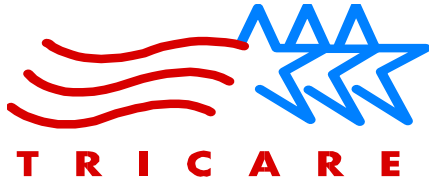
# Data Marts

- Three important data marts:

  - MHS Mart (M2):  All purpose data mart; decision support

  - Care Detail Information System (CDIS):  Claims history system.  Meant for tracking individual claims

  - Managed Care Forecasting and Analysis System (MCFAS):  Population projections and enrollment forecasting tool

# M2

M2:  General "Data Mart"

- One stop shop for most management decision making needs
- Contains data from many key systems
  - MTFs
  - DEERS
  - TMA-Aurora
  - PDTS
  - Functional Proponents

# M2

- M2:  General "Data Mart"

  – Worldwide data about DHP funded healthcare

  – Enhanced content (lots of data not available locally)

  – Monthly updates primarily, some are weekly

  – Easy to operate software

  – Ad-hoc report building

  – Standard Reports

# M2

M2:  General "Data Mart"

- M2 contains data files, organized into directories
- Data Dictionary:
  - Excel, one tab per file
  - Definitions
  - List of valid values
- Data Status Table:
  - Table in M2
  - Describes timing of files available in the system
  - Lists known data quality problems for each file
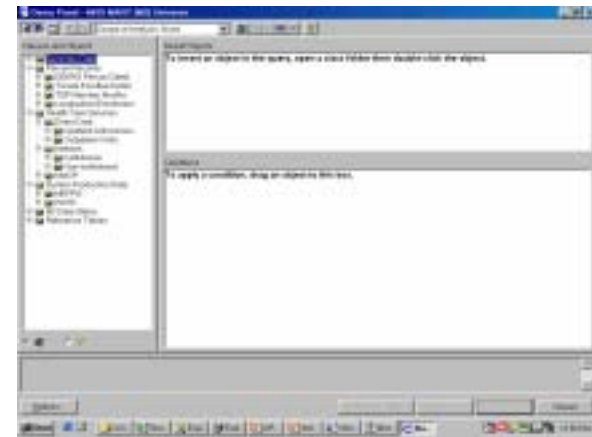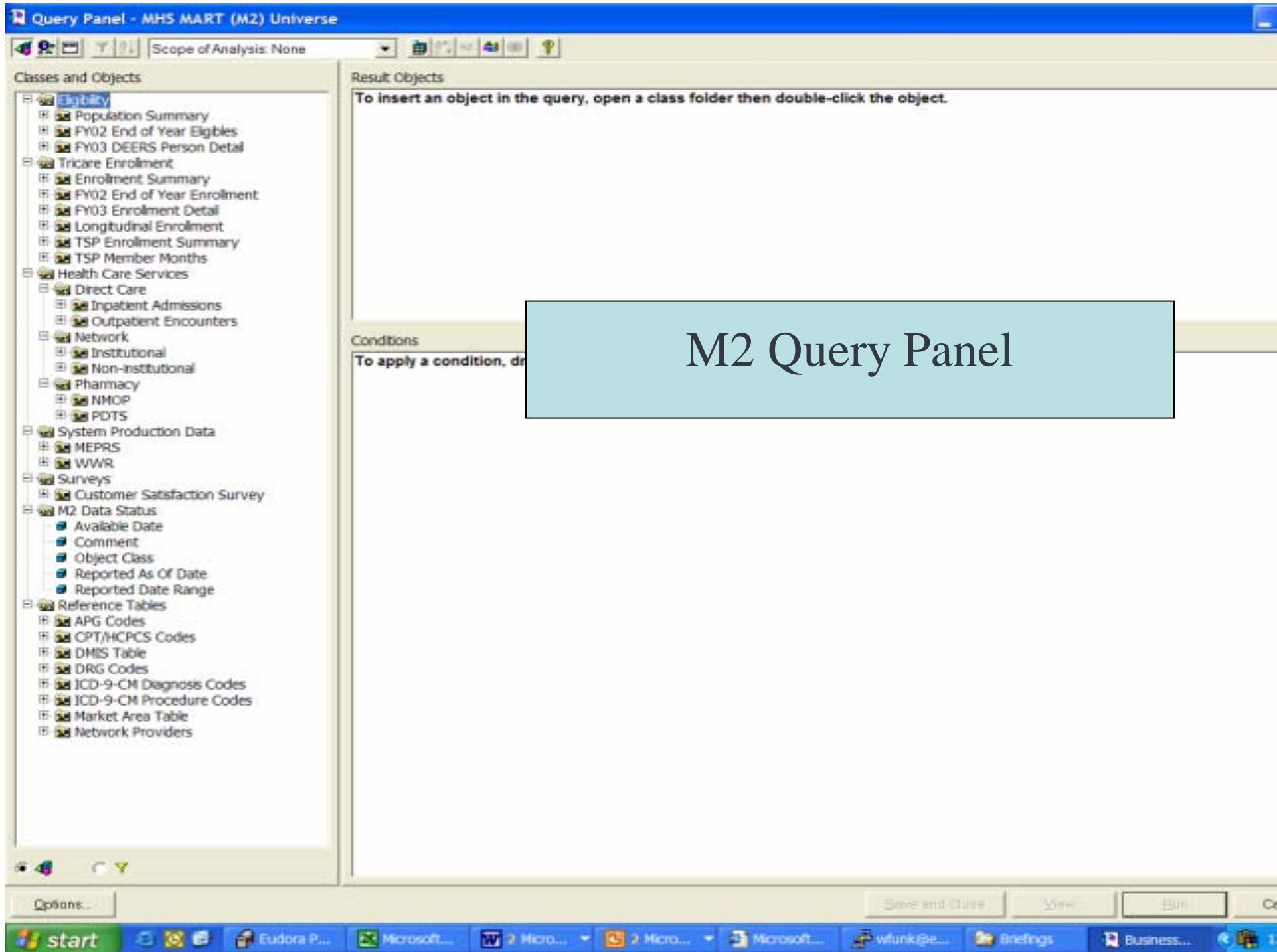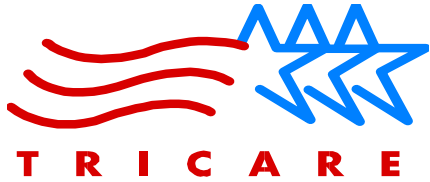
M2 Query Panel

# M2

- Users build reports in M2 by:
  - Opening up a query panel
  - Selecting data elements to return in the report
  - Constructing "filters"
  - Trick is to choose the right files and filters!

# M2

M2 Standard Reports

- – Major organizations can name "report writers"
- – HA, TMA, Lead Agent/TRO, Services
- – Report writers "post" reports on M2
- – Users can view, run and modify reports to suit their needs.

**TMA will be posting standard reports

to assist with managing under the new contracts

# Standard Reports



**Retrieve**

You use this dialog box to retrieve documents from the repository. Right-click on document(s) for additional commands.

☐ Show only this category of documents: `<No Category>`

| Name | Categories | Owner | Schedule | Submission Date | Size | Type |
|------|-----------|-------|----------|-----------------|------|------|
| tma.ops.rm.tnex.hcsr.inv.rep | TMA | TMAPUB12 | No | 8/28/2003 09:... | 194560 | Corporate |
| tma.ops.rm.tnex.enr.rep | TMA | TMAPUB12 | No | 8/28/2003 09:... | 110080 | Corporate |
| TMA.HPA&E.Inpatient SADR Performance.rep | TMA | TMAPUB11 | No | 7/24/2003 06:... | 283648 | Corporate |

☑ Open on Retrieval                                      Help

- Resource Management reports begin with "tma.ops.rm.tnex.*".

- Double click to open report.

- As reports are posted, information will be made available through TMA/RM Website, describing content.

# M2

- WISDOM:

    – Week Long Course

    – M2, MHS Data

    – Decision Making

    – Detailed instruction

    – Bi-monthly, SATX and DC

# Quick Overview of M2 Data

- Eligibility
- Enrollment
- Health Care Services
- PDTS
- Data Status
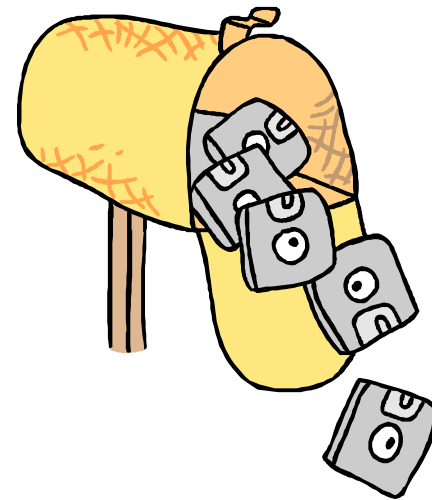
# DEERS

- Source for eligibility and enrollment files is DEERS
  - Numbers in DEERS change minute to minute
  - DEERS sends a snapshot, depicting beneficiary status at a "point in time"
  - The year/month in the data files represent the "point in time"

# DEERS Data Flow

Services

Daily

**DEERS**

MCSCs

Rapids

Monthly

MDR

Annually

MCFAS

Monthly

M2

Others

MDR produces monthly extracts for M2.  MCFAS updates are provided to M2 annually, or whenever MCFAS is updated.

**Query Panel - MHS MART (M2) Universe**

Scope of Analysis: None

Classes and Objects

- Eligbility
  - Population Summary
  - FY02 End of Year Eligbles
  - FY03 DEERS Person Detail
- Tricare Enrollment
  - Enrollment Summary
  - FY02 End of Year Enrollment
  - FY03 Enrollment Detail
  - Longitudinal Enrollment
  - TSP Enrollment Summary
  - TSP Member Months
- Health Care Services
- System Production Data
- Surveys
- M2 Data Status
- Reference Tables

Result Objects

To insert an object in the query, open a class folder then double-click the object.

• Summary:  historical counts (projections also, for eligibles summary)

• Detail:  Separate FY files, one record per beneficiary. FY02 only has year end data.

• Longitudinal File:  Person level enrollment, where each column represents a monthly enrollment DMISID, or ACV

• TSP Files:  Senior Prime.  Demo over!!!

Options... | Save and Close | View | Run | Cancel

start | Eudora Pro - [In] | Microsoft Power... | BusinessObjects... | 6:52 AM

# DEERS Data

- Eligibility -- Summary file:

  - FY97 forward, monthly data

  - Missing some months from FY00 related to start up of new DEERS system.

- Eligibility -- Detail files:

  - Separate fiscal year files

  - FY02, year end

  - FY03+, all available months

**Scope of Analysis: None**

## Classes and Objects

- Eligibility
  - Population Summary
    - Beneficiary Count
    - Age Group Code
    - Beneficiary Category
    - Beneficiary Country Code
    - Beneficiary Region
    - Beneficiary Zip Code
    - BPA Catchment Area ID
    - *BPA Catchment Area Name
    - Catchment Area ID
    - *Catchment Area Name
    - *Catchment Area Command
    - *Catchment Area Military Service
    - Catchment Area ID of Record
    - FM
    - FY
    - Gender
    - Market Area ID
    - PRISM Area ID
    - *PRISM Area Name
    - *PRISM Area Command
    - *PRISM Area Military Service
    - PRISM Area ID of Record
    - Privilege Code
    - Sponsor Service, Aggregate
  - FY02 End of Year Eligibles
  - FY03 DEERS Person Detail
- Tricare Enrollment
- Health Care Services
- System Production Data
- Surveys
- M2 Data Status
- Reference Tables

## Result Objects

**To insert an object in the query, open a class folder then double-click the object.**

## Conditions

**To apply a condition, drag an object to this box.**

# DEERS Data

- Fields in the summary file:

  - FY/FM

  - Bencat (AD, Guard, ADFM, Guard FM, Retirees, Retiree FM, Survivors, Others)

  - Location Info: Zip Code, Catchment and PRISM Area, Region, Country

  - Demographics: Age Group Code, Gender and Sponsor Service

  - Privilege Code (DC, CHAMPUS, Medicare)
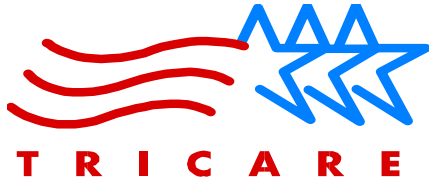
# DEERS Data

- Some sample questions you <u>can</u> answer with the summary:

    - How many people live near me?

    - How much has my guard/reserve population grown since 9/11?

    - What is the MHS eligible population in a zip code?

    - How many pediatric-age beneficiaries are there out there?

# DEERS

- Detail files are available for more specific queries
- Very large files – longer run times
- Person level
- More detailed fields
- Unit, Eligibility Data, Person Data (e.g. dob), coming soon: enrollment status
- (Enrollment data also stored in a separate folder)

# DEERS Data

- Enrollment -- Summary file:

  - FY98 forward, monthly data

  - Many non-standard fields, redesign of file will add new standard content!

- Enrollment -- Detail files:

  - Separate fiscal year files

  - FY02, year end

  - FY03+, all available months

Scope of Analysis: None

**Classes and Objects**

- ⊞ Eligibility
- ⊟ Tricare Enrollment
  - ⊟ Enrollment Summary
    - Capitation Amount
    - Enrollee Count
    - Equivalent Lives
    - ACV
    - Age Group Code
    - Ben Cat Common
    - Cap Rate
    - Catchment Area ID of Record
    - *Catchment Area Name
    - *Catchment Area Command
    - *Catchment Area Military Service
    - Enrollment Site
    - Enrollment Site Name
    - Enrollment Site Command
    - Enrollment Site Military Service
    - Enrollment Site Region
    - Enrollment Site Parent
    - Enrollment Site Parent Name
    - Equivalent Lives Age Group
    - Equivalent Lives Ben Group
    - Equivalent Lives Factor
    - FM
    - FY
    - Gender
    - Market Area ID
    - PRISM Area ID of Record
    - *PRISM Area Name
    - *PRISM Area Command
    - *PRISM Area Military Service
    - Privilege Code, Aggregate
    - Population Sector
    - Sponsor Service, Aggregate
  - ⊞ FY02 End of Year Enrollment
  - ⊞ FY03 Enrollment Detail
  - ⊞ Longitudinal Enrollment
  - ⊞ TSP Enrollment Summary
  - ⊞ TSP Member Months
- ⊞ Health Care Services
- ⊞ System Production Data
- ⊞ Surveys
- ⊞ M2 Data Status
- ⊞ Reference Tables

**Result Objects**

To insert an object in the query, open a class folder then double-click the object.

**Conditions**

To apply a condition, drag an object to this box.

# DEERS Data

- Fields in the summary file:

  - FY/FM

  - Bencat (non-standard field, incorporates service branch, in a funny way!)

  - Enrollment DMIS ID, Alternate Care Value

  - "Equivalent Lives" categories, counts

  - Enrollment Counts

# DEERS Data

- Some sample questions you <u>can</u> answer with the summary:

  - Who is enrolled to me?  In Prime?

  - How many TRICARE Plus enrollees do I have?

  - How has my enrollment changed over time?

- Details, details:

  - Detail file has person level data and more available fields.

Eligibility
Tricare Enrollment
Health Care Services
Direct Care
Network
Pharmacy
System Production Data
Surveys
M2 Data Status
Reference Tables

Result Objects

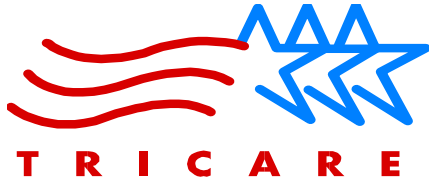**To insert an object in the query, open a class folder then double-click the object.**

Condit

To ap

Health Care Services Folder:

•Records about health care

•Direct Care:  SIDR/SADR Records

•"Network":  HCSR (misnomer, contains all claims, not just network)

•Pharmacy:  PDTS

•  Detail and Summary files available.

**Query Panel - MHS MART (M2) Universe**

Scope of Analysis: None

**Classes and Objects**

- Eligibility
- Tricare Enrollment
- Health Care Services
  - Direct Care
    - Inpatient Admissions
      - Inpatient Admissions Summary
      - Inpatient Admissions Detail
    - Outpatient Encounters
      - Outpatient Encounters Summary
      - FY98 Outpatient Encounters
      - FY99 Outpatient Encounters
      - FY00 Outpatient Encounters
      - FY01 Outpatient Encounters
      - FY02 Outpatient Encounters
      - FY03 Outpatient Encounters
    - Network
    - Pharmacy
- System Production Data
- Surveys
- M2 Data Status
- Reference Tables

**Result Objects**

To insert an object in the query, open a class folder then double-click the object.
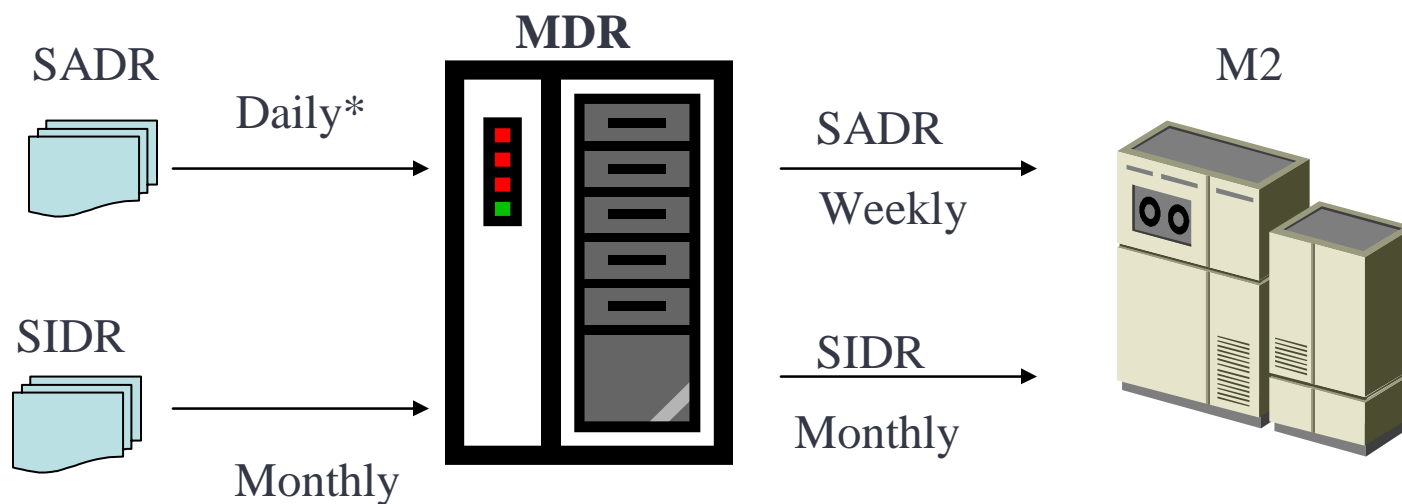
**Conditions**

To apply

- Separate folders for SIDR and SADR
- Both available in detail and summary format
- Detail files contain completed events (dispositions, or "encounters"
- SIDR contains all years in one detail file (small dataset)
- SADR files are separated by fiscal year due to size

# Direct Care Data Flow
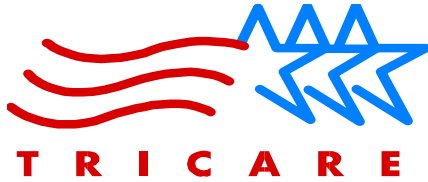
SADR

Daily*

**MDR**

SADR

Weekly

M2

SIDR

Monthly

SIDR

Monthly

MDR produces extracts for M2. The SIDR files are updated monthly, the SADR files are updated weekly.

# Direct Care Data

- Both SIDR/SADR originate from CHCS -- many common fields

    - Beneficiary Category, Sponsor Service

    - Enrollment Data (DMIS ID, ACV)

    - Zip Code, Catchment Area, PRISM Area, Region

    - MEPRS Code(s), Diagnosis Codes

    - Patient Identifiers

    - Full and Variable Cost Estimates

# SIDR/SADR Fields

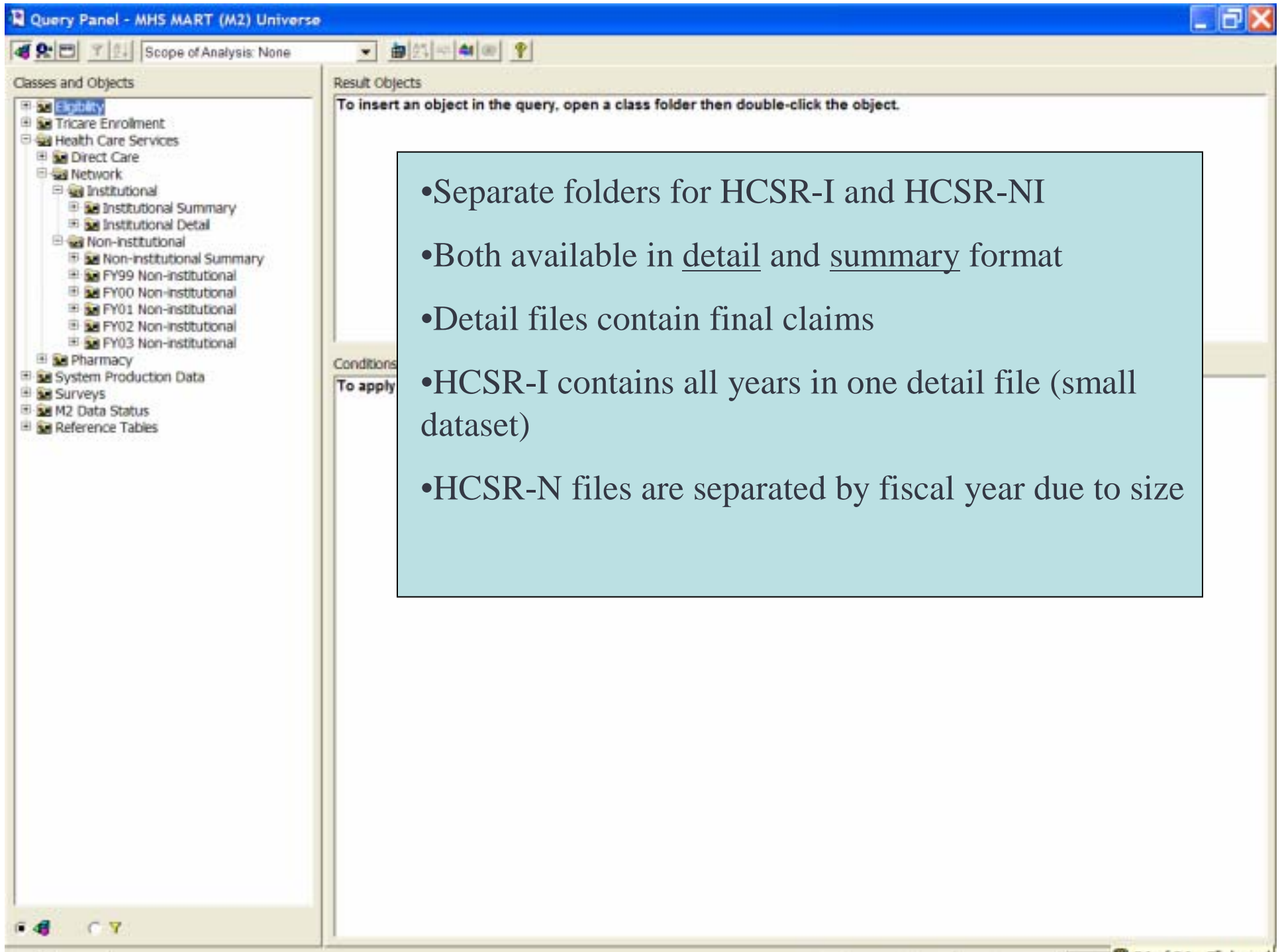| Information | SIDR | SADR |
|---|---|---|
| Px Codes | ICD-9 CM | CPT |
| Classifications | DRG (1) | APG (Many) |
| Weights | RWP | APG/RVU |
| Provider | | Specialty, ID |
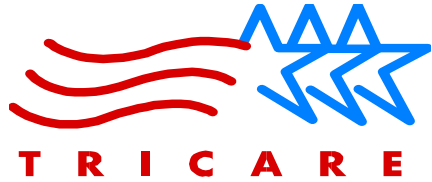
# SIDR/SADR

- Some sample questions you <u>can</u> answer with the SIDR/SADR files:

  - What types of services am I providing?  To whom?  At what cost?

  - Which providers produce the most workload?

  - Am I seeing other MTF's prime, when I could be seeing my own?  Where are my patients coming from?
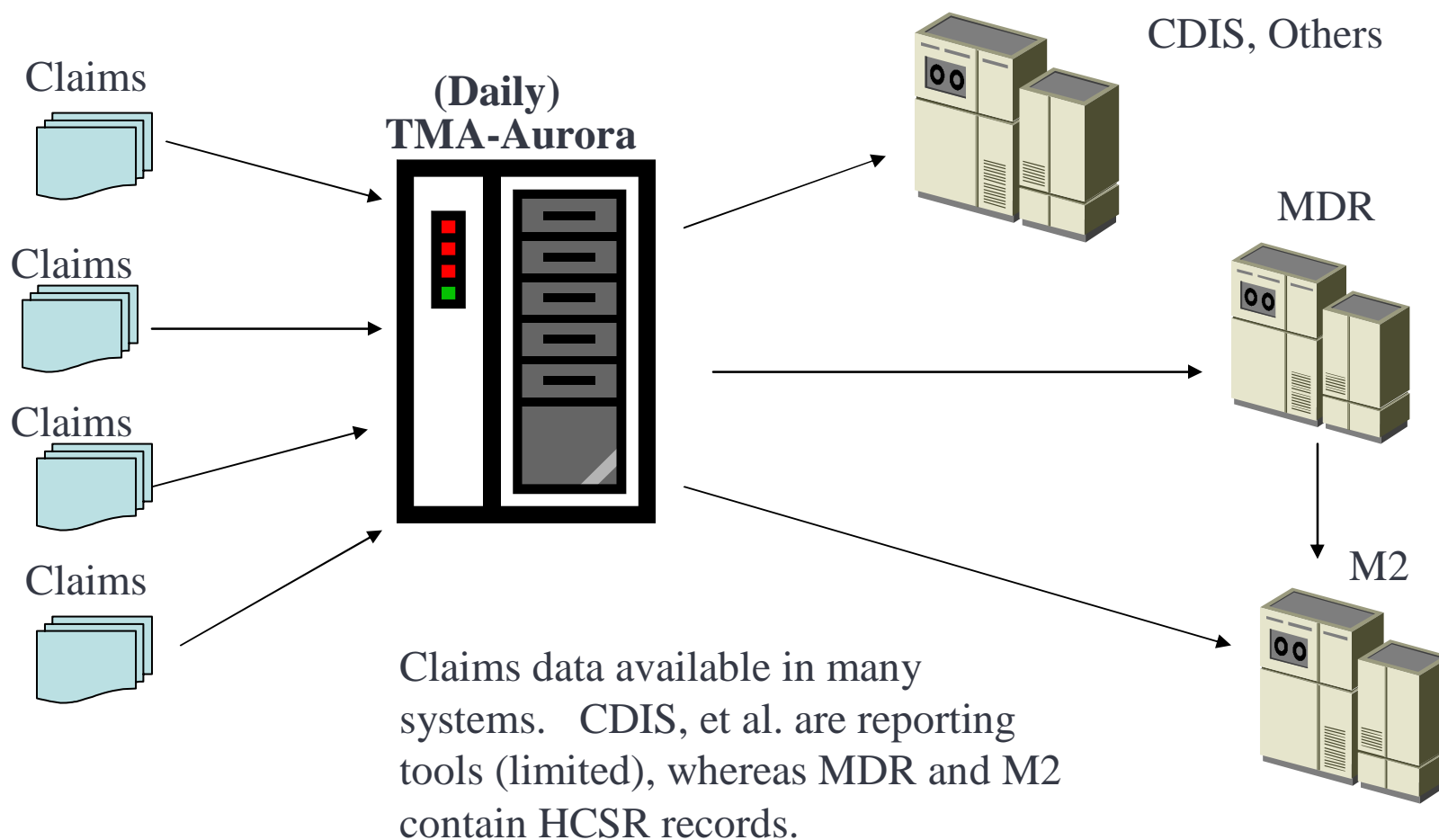
# Health Care Services Network

- "Network" file contains TRICARE Claims
- Not limited to those from network providers
- Only final version of claim posted in M2.
- Two types of claims records:
  - Institutional (hosp)
  - Non-Institutional (prof, office vis, rx, etc)
- Not split by inpatient/outpatient, but by who submitted the claim. Some questions require querying both tables!

Scope of Analysis: None

Classes and Objects

- Eligibility
- Tricare Enrollment
- Health Care Services
  - Direct Care
  - Network
    - Institutional
      - Institutional Summary
      - Institutional Detail
    - Non-institutional
      - Non-institutional Summary
      - FY99 Non-institutional
      - FY00 Non-institutional
      - FY01 Non-institutional
      - FY02 Non-institutional
      - FY03 Non-institutional
  - Pharmacy
- System Production Data
- Surveys
- M2 Data Status
- Reference Tables

Result Objects

To insert an object in the query, open a class folder then double-click the object.

Conditions

To apply

- •Separate folders for HCSR-I and HCSR-NI

- •Both available in <u>detail</u> and <u>summary</u> format

- •Detail files contain final claims

- •HCSR-I contains all years in one detail file (small dataset)

- •HCSR-N files are separated by fiscal year due to size

# Claims Data Flow

Claims

Claims

Claims

Claims

**(Daily)**
**TMA-Aurora**

CDIS, Others

MDR

M2

Claims data available in many systems.   CDIS, et al. are reporting tools (limited), whereas MDR and M2 contain HCSR records.
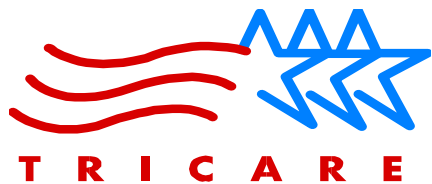
- HCSR Fields

  - Beneficiary Category, Sponsor Service (caution)

  - Enrollment Data (DMIS ID, Enr. Status)

  - Zip Code, Catchment Area, PRISM Area, Region

  - Provider Location/ID

  - Diagnosis Codes

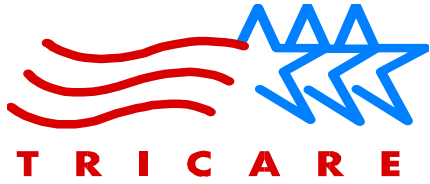  - Patient Identifiers

  - Cost/Charge Data

# HCSR Fields

| Information | HCSR-I | HCSR-NI |
|---|---|---|
| Px Codes | ICD-9 CM | CPT |
| Classifications | DRG (1) | N/A |
| Weights | RWP | RVU |
| Provider | ID, Zip | ID, Zip, Specialty |

- Additional fields are available to help discern types of care/claims:

  - Special Processing Codes

  - Place of Service

  - Type of Service

  - Type of Institution

# HCSR

- Some sample questions you <u>can</u> answer with the HCSR files:

  - What's leaking downtown?

  - How much does it cost to buy a service downtown? Are some providers cheaper than others?

  - Are there providers downtown that do particular procedures?

  - Where are my enrollees getting care?

- Pharmacy Data Transaction Service:

  —Rx records for all DHP funded prescriptions (except paper claims from downtown).

  — One record per fill

  — Demographics (including enrollment), Provider, Drug and Cost Information

# PDTS

- Some sample questions you <u>can</u> answer with the PDTS files:

  - Where are my patients coming from?  Are my enrollees getting prescriptions filled at my MTF (where it costs me the least)?

  - Of my enrollees with a particular condition (say heart attack patients), who needs a particular prescription

# Other M2 Data

- MEPRS – Tri-Service Financial data

  – Costs, workload and "staff"

  – Summary data only

  – MEPRS does "work center" level costing

  – MEPRS Code, Treatment DMIS ID

  – Updated monthly

# Other M2 Data

- Worldwide Workload Report (WWR)

    – Monthly MTF workload data

    – Raw counts

    – Inpatient:  Dispositions, Admissions and Days

    – Ambulatory:  Count Visits

    – MTF, MEPRS Code, Bencat, FY and FM

**T R I C A R E**

- Next M2 Change Package to include "ODRA" data

  - "Earnings" to be added to SIDR, SADR and PDTS reflecting ODRA value for each record

  - "Capitation rates"

  - Equivalent Lives

- Will allow MTFs to monitor actual earnings compared with capitation rates

- Many significant files in M2

- Standard reports are there for users who don't want to remember all the tricky business rules

- But users have the flexibility to create their own queries as well!
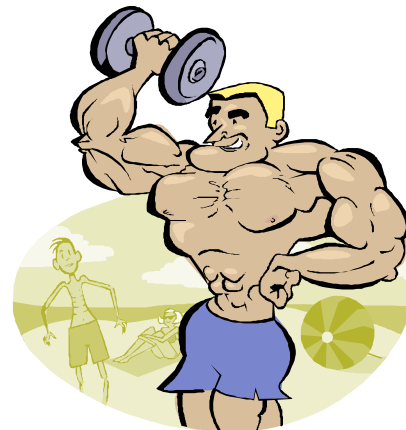
- Major benefit in using M2 is it's ability to look across the various sources…..

  – Costs per member per month

  – Utilization rates (disps per 1000 enrollees)

  – Population Health (who needs a beta blocker, etc)

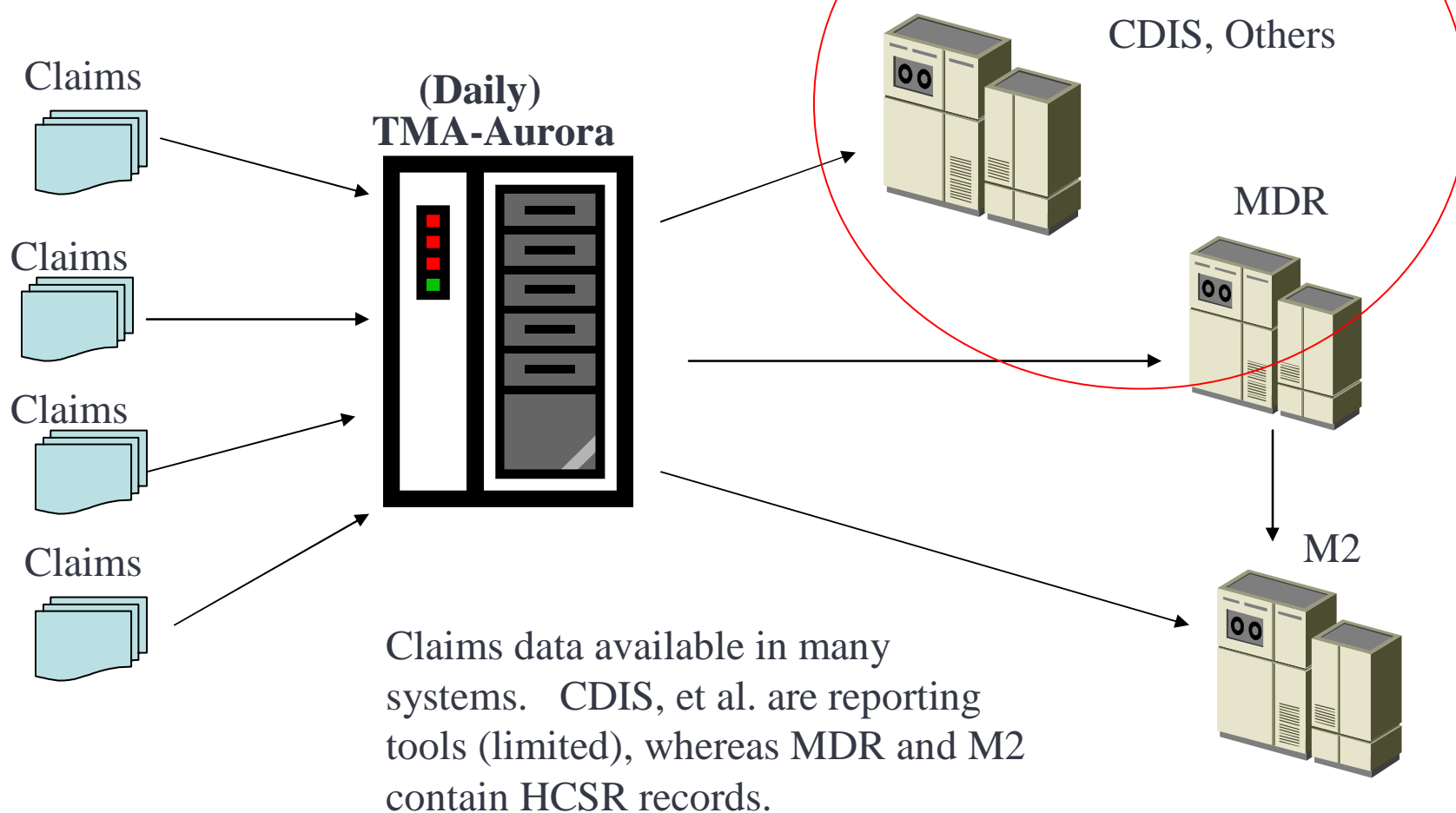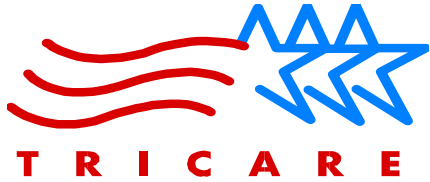  – What will it cost to send enrollees to another MTF, vs. sending downtown….

# M2 Re-Cap

- Will address most business questions… except….

  – Real time needs (local systems)

  – Very specific questions (local systems/sources)

  – MTF Ancillaries (local systems)

  – Claims Histories
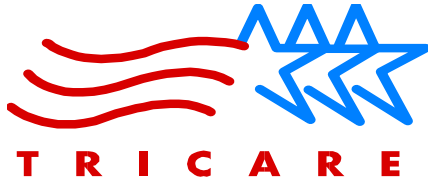
# Claims Data Flow

Claims

Claims

Claims

Claims

**(Daily)**
**TMA-Aurora**

CDIS, Others

MDR

M2

Claims data available in many systems.   CDIS, et al. are reporting tools (limited), whereas MDR and M2 contain HCSR records.

# CDIS

- CDIS allows for viewing of <u>individual claims</u> on real time basis
- Includes history of claim – while M2 only contains most recent version!
- M2 will allow for reconciliation of most claims (those that weren't adjusted)
- CDIS claim history can help to assess claims where the invoice amounts might be different than data displayed in M2.

# CDIS

- HCSR No.  (TED No.) – assigned by the contractor in claims adjudication process

- Invoices, M2 claims data, and CDIS all use the same "key"

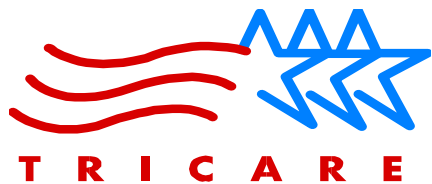- CDIS doesn't work for querying large numbers of claims!  Need to use M2 for that……

# CDIS

- HCSR No. (TED No.) – assigned by the contractor in claims adjudication process
- Invoices, M2 claims data, and CDIS all use the same "key"

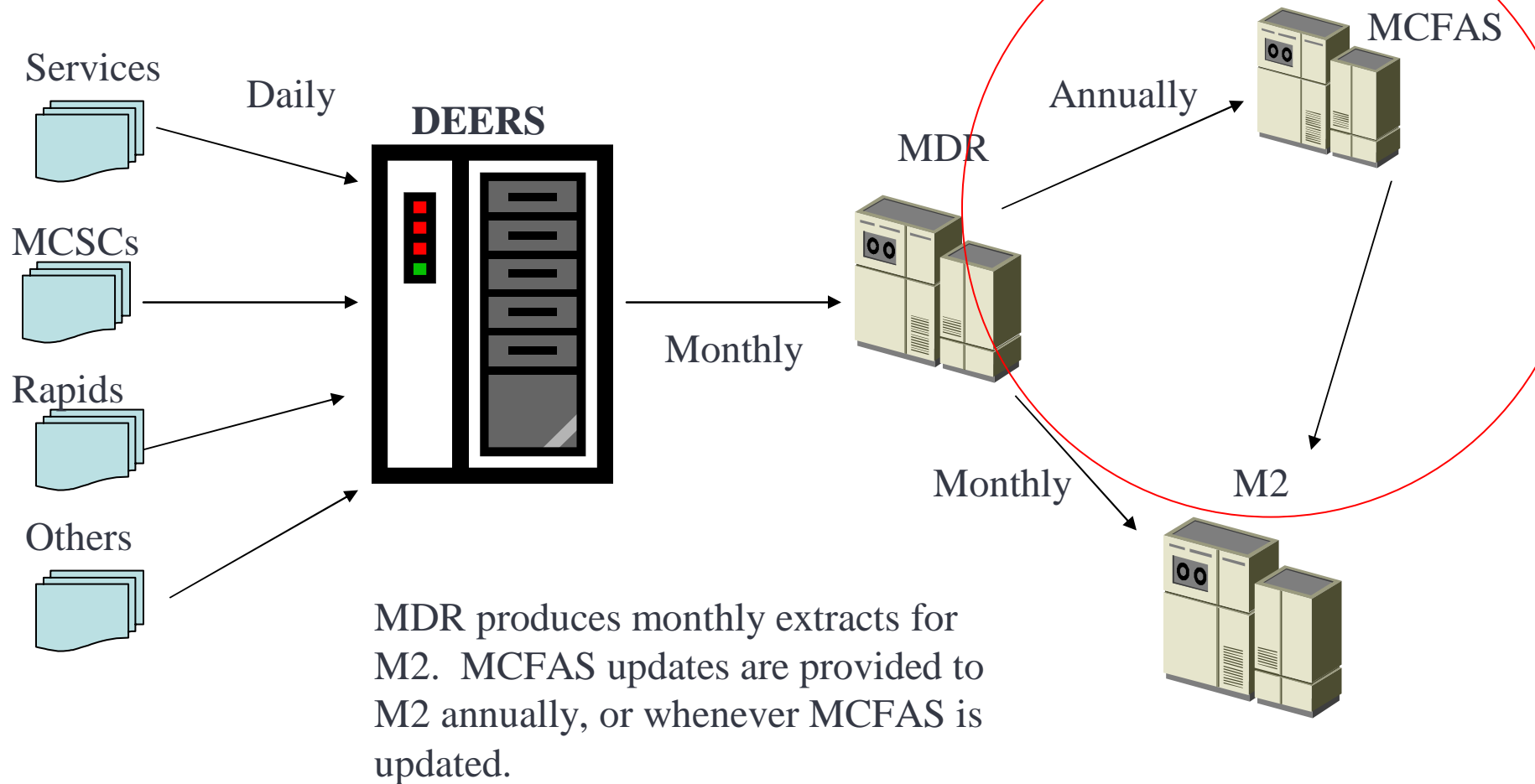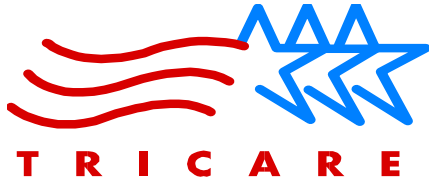- CDIS doesn't work for querying large numbers of claims! Need to use M2 for that……

# MCFAS

- Managed Care Forecasting Analysis System
- Population projection system
- Built for resource management community
- Primarily intended for budgeting, but used for many purposes
- M2 contains projected MCFAS data also!

# DEERS Data Flow

Services

Daily

**DEERS**

MCSCs

MDR

MCFAS

Annually

Rapids

Monthly

Monthly

M2

Others

MDR produces monthly extracts for M2. MCFAS updates are provided to M2 annually, or whenever MCFAS is updated.

# MCFAS

- MCFAS also provides a tool for projecting enrollment
- There are no canned projections, though!
- Users enter information about staffing, etc, and then enrollment capacities are projected

# Websites

- TMA/RM websites
  - Two separate sites
  - Being consolidated onto one server
  - Provides tools to assist in managing under next generation of contracts!

- Purchased Care visibility reports (EBC Site)
  - Inpatient/Outpatient, Pharmacy, Supp Care and Resource Sharing

# Purchased Care Website

- Claims/Invoice reconciliation reports
- https://199.211.84.37/Purchased_care/
- Daily Ad-hoc reporting
  - See all PC costs for patient enrolled at YOUR facility (within 24 hours of receipt of TED info by TMA)
- End-of-month reconciliation
  - Determine amount of expected billings

# Purchased Care Website

- Downloadable reconciliation files providing ability to lookup patient level information by claim

- Data represent actual expenditures recorded in TMA PC accounting system
  - Costs would be paid by facility if currently operating under TNEX contract methodology

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PURCHASED CARE HOME | DMIS ID RC HOME | PRIOR YEAR DATA | DMIS ID DIRECTORY | COMMENTS | EMAIL SUPPORT

# DMIS ID RECONCILIATION REPORT - CHILD DMIS ID REPORT
RUN DATE: 07-OCT-2003 - RUN TIME: 04:34

**CHILD DMIS ID: 0037**

REGIONS: ALL REGIONS
PROGRAMS: ALL PROGRAMS

Click on MTF Name for additional drill down

.TXT    PRINT

| MONTH | DMIS ID | MTF NAME | BILL TO | TOTAL |
|-------|---------|----------|---------|-------|
| October | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $166,465.33 |
| November | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $157,349.21 |
| December | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $165,428.91 |
| January | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $111,905.39 |
| February | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $46,233.11 |
| March | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $53,388.66 |
| April | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $133,407.47 |
| May | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $140,277.74 |
| June | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $183,917.23 |
| July | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $145,486.34 |
| August | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $198,275.86 |
| September | 0037 | WALTER REED ARMY MEDICAL CENTER | ARMY | $102,688.39 |
| GRAND TOTAL | | | | $1,604,823.64 |

PURCHASED CARE HOME | DMIS ID RC HOME | PRIOR YEAR DATA | DMIS ID DIRECTORY | COMMENTS | EMAIL SUPPORT

# DMIS ID RECONCILIATION REPORT - SUMMARY BY REGION
RUN DATE: 07-OCT-2003 - RUN TIME: 04:35

**FOR ACCOUNTING PERIOD: OCTOBER - 2003**

PROGRAMS: ALL PROGRAMS

REGIONS: ALL REGIONS

**FACILITY: WALTER REED ARMY MEDICAL CENTER**
**DMIS ID: 0037**

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| DMIS ID | SPONSOR BOS | BENEFICIARY | BILL TO | AMOUNT |
|---------|-------------|-------------|---------|--------|
| 0037 | Army | Active Duty | ARMY | $91,386.24 |
| 0037 | Army | Family Member | ARMY | $48,956.76 |
| 0037 | Army | Retiree | ARMY | $3,950.00 |
| 0037 | Air Force | Active Duty | ARMY | $508.77 |
| 0037 | Navy | Active Duty | ARMY | $18,055.80 |
| 0037 | USCG | Active Duty | ARMY | $22.64 |
| 0037 | PHS | Active Duty | ARMY | $1,003.76 |
| 0037 | Army National Guard | Active Duty | ARMY | $2,456.96 |
| 0037 | Air National Guard | Active Duty | ARMY | $124.40 |
| **GRAND TOTAL** | | | | **$166,465.33** |

THIS REPORT SHOWS THE TOTAL COST FOR A MTF PER SPONSOR BRANCH OF SERVICE